1866.] DR. J. E. GRAY ON THE RHINOLOPHINE BATS.

Urotrichus talpoides, Temm., Dicrurus leucophæus, Vieill., and Urocissa sinensis.

Mr. W. H. Flower read the first part of a Memoir on the Osteology of the Sperm-Whale (*Physeter*). This will be published in the Society's 'Transactions,' with Illustrations.

The following papers were read :---

1. A Revision of the Genera of Rhinolophidæ, or Horseshoe Bats. By Dr. J. E. GRAY, F.R.S., V.P.Z.S., F.L.S., &e.

At the preceding Meeting I gave an account of the genera of *Pte-ropidæ*. I have lately been revising my former manuscript on the Horseshoe Bats, and adding descriptions of the specimens which have been received at the British Museum since it was composed.

The family Rhinolophidæ is characterized as containing Leafnosed Bats, which have only rudimentary intermaxillary bones, suspended in the nasal cartilages. They sometimes have upper cuttingteeth; but these are generally early deciduous. The hinder, erect portion of the nose-leaf is often complicated and divided by septa into cells.

- I. Nose-leaf broad, expanded, horseshoe-shaped in front, with the nostril near the centre; the hinder portion erect, triangular, acute, with cells on the side of its front surface. Tragus none.
- 1. The hinder, erect part of the nose-leaf with three cells on each side in front, and a compressed central process; front portion simple, without any pits. Tail and heel-bone distinct. Teeth 32; molars 3/3, premolars 2/3. Rhinolophina.

1. AQUIAS. Front edge of the central longitudinal nasal process broad, with a membranous edge, which is expanded and folded down on each side of its base. *A. luctus* and *A. trifoliata*.

2. PHYLLOTIS. Front of the central longitudinal nasal process broad, with a membranous edge, which is continued so as to form a concavity between the nostrils. *P. philippensis*.

3. RHINOLOPHUS. Front of the central longitudinal nasal process flat, without any membrane on the edge or lobe at the side of the base. *R. hastatus.*

- 2. The hinder, erect part of the nose-leaf with one cell on each side, and one in the centre of the front, and with a compressed longitudinal process; the front, horseshoe-shaped portion fringed with a longitudinal crest, ending in a pit between the nostrils. Rhinonycterina.
- 4. RHINONYCTERIS. R. aurantius. PROC. ZOOL. SOC.--1866, No. VI.

II. The hinder portion of the nose-leaf convex, with a transverse ridge in front below, with the broad apex bent down over the ridge, and divided by longitudinal folds into cells beneath; without any central longitudinal ridge in front.

1. The upper edge of the upper part of the nose-leaf entire. Tail and heel-bone distinct. Teeth 30; molars 3/3, premolars 1/2.

5. MACRONYCTERIS. Forehead with a central longitudinal pore in both sexes; horseshoe portion of the nose-leaf with raised membranaceous edges, forming a cup; sides of the nose leafy; forehead hairy. *M. gigas*.

6. GLOIONYCTERIS. Forehead with a transverse pore in both sexes; the horseshee portion of the nose-leaf with a raised membranaceons edge, forming a cup; sides of the nose leafy; forehead glandular on the sides. G. armigera.

7. RHINOPHYLLA. Forehead with a small transverse pore with two small pores close together on each side of it; front edge of the horseshoe portion of the nose-leaf raised, membranaceous, and bent up in the middle, forming a central notch; sides of the nose leafy; forehead hairy; wings from lower part of the ankles. *R. labuanensis*.

8. SPEORIFERA. Forehead with a large transverse pore in the males, and its place marked with a pencil of dark hairs in the females, and with two pores on the sides; the front edge of the horseshoe portion of the nose-leaf closely applied to the lip; sides of nose leafy; forehead hairy. S. vulgaris.

9. CHRYSONYCTERIS. Forehead with a transverse central pore in both sexes, with two pores near it on each side of it; the front edge of the horseshoe portion of the nose-leaf flat, closely applied to the lip; sides of the nose leafy; forehead hairy. *C. fulva.*

10. PHYLLORHINA. Forehead without any pores behind the nose-leaf. *P. nobilis* and *P. pygmæa*.

2. Upper edge of the upper part of the nose-leaf two- or threetoothed. Teeth 28; molars 3/3, premolars 1/2.

11. ASELLIA. The upper edge of the upper part of the nose-leaf three-toothed. Tail and hecl-bone distinct, produced. A. tridens and A. tricuspidata.

12. COLOPS. The upper edge of the upper part of the nose-leaf two-toothed. Tail and heel-bone none. C. frithii.

111. Nose-leaf simple, coriaceous; the hinder, upper portion erect, leaf-like, without any cells in front. Tragus distinct.

 The nose-leaf flat, with the nostril simply pierced in its front part. Forehead concave. Tail elongate, free, longer than the short interfemoral membrane. Teeth 28; molars 3/3, premolars 1/2. Rhinopomina.

13. RHINOPOMA. R. microphyllum.

82

Phyllorhinia

2. Nose-leaf with a central midrib, the sides of which are extended downwards between and covering the nostrils. Tail none; interfemoral membrane very large. Megadermina.

14. MEGADERMA. Nose-leaf divided into two parts by a transverse ridge behind the nostrils; front portion flat on the nose. Teeth 32; molars 3/3, premolars 2/2.

a. The transverse ridge ascending on each side, forming an oval disk. Megaderma. M. lyra.

b. The transverse ridge bent down in the centre, forming a cordate disk. Spasma. M. spasma.

15. LAVIA. Nose-leaf simple, without any transverse ridge behind the nostrils; the front portion concave, with a raised front edge. Teeth 30; molars 3/3, premolars 1/2. L. frons.

IV. The nostrils in the front of a deep longitudinal cavity on the nose, with two pairs of laminæ on each side of it; the front pair with a subspiral fold in front. Tail elongate; terminal joint with a transverse process on each side, edging the membrane. Nycterina.

The wings from the ankles; the skull broad; forehead with a deep circular concavity, truncated in front; intermaxillary well developed, free on the sides. Cutting-teeth $\frac{2-2}{6}$; upper free from the canines. Chin with two longitudinal ridges enclosing a triangular prominence.

16. NYCTERIS. Ears united at the base, very long. Africa. N. thebaica.

17. NYCTEROPS. Ears separate, as long as the head. Africa. N. pilosa.

18. PELATIA. Ears separate, very long. Asia. P. javanica.

The laminæ on the sides of the nose-leaves and the glands on the forehead and other parts of the body may be very distinctly seen in the newly born specimens that have been preserved in spirits, the short hair allowing them to be seen more distinctly than in the adult animals.

The name of *trifoliatus* was given by Temminck to one species of the genus Aquias; and two species are distinguished by that author —one as having a nose-leaf like a St. Andrew's cross, and the other as having a nose-leaf like a trefoil; and they are so figured in his Monograph, ii. t. 30, 31. These forms of the nose-leaf, however, are entirely dependent on the art, or rather want of care, of the animal-preserver; for the lobes that are expanded to produce them are, in specimens preserved in spirits, and doubtless also in living animals, bent down over the cavity between the nostrils.